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EXAMINER	
CHANKONG, DOHM	
ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/680,559	HIPP ET AL.	
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1> This action is in response to Applicant's RCE. Claims 25-45 are presented for further examination.

2> This is a non-final rejection.

Response to Arguments

3> Applicant's arguments with respect to claims 25-45 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims in part to read that a process is initiated on a computer and asserts that Gamache fails to disclose such a function. Applicant has merely asserted that Gamache is deficient and has not provided any guidance as to why he believes Gamache does not disclose this limitiation.

Gamache is directed towards migrating applications from one computer to another. Thus, Examiner believes that it seems inherent that all of Gamache's processes (applications) would necessarily be initiated on a computer. Therefore, Applicant's amendment, defining that a process of an application is initiated on a computer, does not seem to overcome Gamache.

Further Applicant has amended the claims in part to read that the first application executes on the operating system on the computer. Similar to the statement above, this seems to be inherent in Gamache as operating systems are necessary for computers to function. If an application "runs" on a computer, by implication, the application is running

on the operating system that operates the computer. Furthermore, Gamache discloses an operating system on the computer where the application programs are executed [Figure 1 «items 35 and 36»].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4> Claims 25-35, 39-41 and 45 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache et al, U.S Patent No. 6.243.825, in view of Aiken, Jr. et al, U.S Patent No. 6.430.622 ["Aiken"], in further view of Sun et al, U.S Patent No. 6.442.663 ["Sun"].

5> As to claim 25, Gamache discloses a method comprising:

initiating a first process on a computer, wherein the first process is separate from a first application that comprises one or more second processes [Figure 2 | column 2 «lines 14-32» | column 7 «lines 4-27» | column 10 «lines 18-29» where : Gamache's application corresponds to a first process, the application located on a network machine (item 60) in the cluster];

assigning a unique Internet Protocol (IP) address and virtual hostname to the first application on the computer [column 11 «line 46» to column 12 «line 8»];

the first process registering the IP address and the virtual hostname with a software module interposed between the first application and an operating system on the computer, the first application executing on the operating system on the computer during use [Figure 1 «items 35, 36» | Figure 8 | column 6 «lines 33-40» | column 12 «lines 9-36» where : an operating system is essential to the operation of all computers, thus when an application runs on a computer, it necessarily and inherently runs on the operating system of the computer];

the first process initiating at least one of the more second processes of the first application on the computer [column 10 «lines 18-29» | column 11 «lines 1-6» | column 12 «lines 37-51»]; and

the at least one second process inheriting the IP address and the virtual hostname from the first process [column 11 «lines 56-62» | column 12 «lines 9-36» where : Gamache's resource monitor directs the virtual name and IP address pairs of the application].

Gamache does not explicitly disclose that the IP address is a virtual IP address nor does he disclose that the software module is located on the computer.

6› In the same field of invention, Aiken is directed towards application state migration in a clustered networking environment [abstract]. Aiken also discloses transferring virtual IP addresses between application processes [column 4 «lines 2-33»]. It would have been obvious to one of ordinary skill in the art to modify Gamache's IP address to be a virtual IP address as taught by Aiken. One would have been particularly motivated to provide such an implementation in Gamache as virtual IP addresses allow the address to be dynamically

associated instead of statically associated [see Aiken, column 1 «lines 37-58»] which would enable the addresses to be transferred along with the virtual name in Gamache's system.

7> Sun is directed towards migrating processes between computers by providing a data structure that enables state information to be registered in a machine independent manner [abstract | column 10 «lines 55-57»]. Sun discloses a feature that helps achieve this goal, whereby he saves state information concerning the processes on a software module (data structure) located on the computer of the process [Figure 2 | column 10 «lines 57-65» | column 19 «lines 45-50»]. While Sun's registration of state information does not include registering virtual addresses or hostnames, Sun's implementation is particularly useful for modifying Gamache and Aiken's application state migration system by allowing each process to have access to a software module whereby they can register application information, such as the disclosed virtual addresses and hostnames. It would have been obvious to one of ordinary skill in the art to do so because Sun's data structure provides desirable advantages including being able to migrate complex state information from one machine to another and insure that the data is in a machine-independent format. This motivation is consistent with Gamache's desire to create applications that are machine-independent as well.

8> As to claim 27, Gamache discloses the method of claim 25, further comprising:

the first application issuing a hostname request [column 11 «lines 35-38»]; and

the software module responding to the hostname request with the virtual hostname [column 11 «lines 35-50» | column 12 «lines 9-51»].

9> As to claim 28, Gamache and Aiken disclose the method of claim 25, further comprising resolving the virtual hostname to the virtual IP address [column 12 «lines 20-31» : "name to address mapping" & see combination motivation in claim 25].

10> As to claim 29, Gamache and Aiken disclose the method of claim 28, further comprising using the virtual IP address as a local address [column 11 «line 66» to column 12 «line 3» | column 12 «lines 9-11» where : the IP address is used by the application at the machine to which it is being migrated & combination motivation in claim 25].

11> As to claim 30, Gamache discloses the method of claim 28, further comprising configuring one or more address resolution mechanisms to resolve the virtual hostname to the IP address [column 12 «lines 9-51»].

12> As to claim 31, Gamache does not disclose performing the resolving in response to a request from a second application.

13> Aiken discloses performing the resolving in response to a request from a second application [column 10 «lines 41-53» | column 12 «lines 21-31»]. It would have been obvious to one of ordinary skill in the art to modify Gamache's system to include a second application enabling better recovery and movement of IP addresses within a cluster [see Aiken, column 3 «lines 19-21 and 56-67»].

14> As to claim 32, Gamache discloses the method of claim 31, wherein the one or more address resolution mechanisms comprises a domain name service [column 12 «lines 31-36»].

15> As to claim 33, Gamache discloses the method of claim 30, wherein the one or more address resolution mechanisms comprise a file maintained by the operating system [Figure 4 | column 6 «lines 16-26»].

16> As to claim 34, Gamache discloses the method of claim 25, wherein the assigning is dynamic [column 11 «lines 38-50» where : if the environment variable is not present, than they are dynamically given the name of a machine].

17> As to claim 35, Gamache discloses the method of claim 25, wherein the assigning is static [column 11 «lines 38-50» where : if the variable is present (static), then it is simply assigned the name specified by the variable].

18> As to claims 39, 41 and 45 as they do not distinguish or further define over the limitations of claims 25 and 27 respectively, they are rejected for reasons set forth for claims 25 and 27, above.

19› Claims 26 and 40 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Aiken and Sun, in further view of Albert et al, U.S Patent No. 6.061.807 ["Albert"].

20› As to claims 26 and 40, Gamache discloses the method of claim 25, further comprising the first process using a first application identifier in the registering, [column 10 «lines 18-29» | column 12 «lines 9-14» where : the resource monitor registers an application name of the application, "program.exe"], but does not expressly disclose the inheriting comprising receiving the first application identifier from the first process.

21› Albert is directed towards a system for error recovery of endpoints such that applications running on a failed endpoint can be recovered to other endpoints. Albert achieves this goal in part through the use of state information that saved and commonly accessible to all endpoints in the system [column 3 «lines 15-20»]. Therefore, an endpoint can retrieve state information of applications in a manner that would rapidly recover them. Further, Albert discloses that the state information is inherited in part by receiving an application identifier from the first process [column 9 «lines 46-56»]. It would have been obvious to one of ordinary skill in the art to incorporate Albert's use of the application name as a means of searching for application information into Gamache's system. Gamache suggests utilizing the application name ("program.exe") but failed to explicitly state it. Thus, Albert teaches that such a function is useful for enabling other endpoint applications to

search for the necessary process information using the process name, which allows for more rapid recovery of applications during migration.

22> Claims 36 and 42 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Aiken and Sun, in further view of Yu et al, U.S Patent No. 5,734,865 ["Yu"].

23> As to claims 36 and 42, Gamache and Aiken do not disclose a virtual interface having the virtual IP address and virtual hostname.

24> In a similar field of invention, Yu discloses a virtual interface having the virtual IP address and virtual hostname [Figure 5 «"if_name", "virtual host IP address"» | Figure 7c | column 10 «lines 15-16» | column 12 «line 47» to column 13 «line 39»]. It would have been obvious to one of ordinary skill in the art to incorporate Yu's virtual interface into Gamache's system. One would have been motivated to provide the virtual interface implementation into Gamache as virtual interfaces provide a means for applications to be shared across a wider variety of networking protocols [see Yu, column 3 «lines 46-56»]. Therefore Yu's virtual interface would enable Gamache's applications to be utilized over different protocols.

25> Claims 37 and 43 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Sun, Aiken and Yu, in further view of Primak et al, U.S Patent No. 6,389,448 ["Primak"].

26› As to claims 37 and 43, Gamache and Aiken do not explicitly disclose associating the virtual IP address with a physical IP address of a computer on which the first application is executing.

However, it should be noted that it is well known in the art that virtual IP addresses are mapped to a physical IP address. Without this association, virtual IP addresses would be useless to a network if it did not direct a user to a physical real address. For example, Primak discloses how ARP maps virtual IP address to real IP address [column 6 «lines 6-19»]. As Gamache also discloses binding the IP address to a computer device [column 12 «lines 20-25»], it would have been obvious to one of ordinary skill in the art to have reasonably inferred that Gamache and Aiken's virtual IP addresses would be associated with a physical address of the machine on which an application is located.

27› Claims 38 and 44 are rejected under 35 U.S.C § 103(a) as being unpatentable over Gamache, Sun, Aiken and Yu, in further view of Applicant's admitted prior art ["AAPA"].

28› As to claims 38 and 44, Gamache and Aiken do not explicitly disclose associating the virtual IP address with a loopback address.

29› According to AAPA, associating IP addresses with loopback network interfaces is "provided by some standard operating systems and allows the host to use one or more IP addresses as the local address for a single network interface" [see Applicant's specification,

page 19 «lines 21-22»]. Yu discloses that network interfaces are associated with addresses of a computer on which applications are executed [Figure 5 «"common local host IP address"» | column 12 «line 47» to column 13 «line 39»]. Therefore it would have been obvious to one of ordinary skill in the art to modify Gamache to associate IP addresses with loopback network interfaces (which is constructed of the "common local host IP address") as this is a common functionality provided by standard operating systems and enables hosts to use a plurality of IP address as a local address for the interface.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Thursday [7:00 AM to 5:00 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC

BUNJOB JAROENCHONWANIT
PRIMARY EXAMINER